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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,937	07/24/2001	Amit S. Phadnis	CSCO-005/2899	4820

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LAW FIRM OF NAREN THAPPETA
C/O LONDON IP, INC.
1700 DIAGONAL ROAD, SUITE 450
ALEXANDRIA, VA 22314

EXAMINER

CHEN, ALAN S

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/910,937

Applicant(s)

PHADNIS ET AL.

Examiner

Alan S. Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

PD

DETAILED ACTION

Response to Arguments

1. The affidavit and declaration filed on 07/20/2005 under 37 CFR 1.131 is sufficient to overcome the Hariu reference. However, this is moot in view of a new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 1-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobson as in view of Bhatia et al. (Bhatia) and Hirano.

6. Referring to claim 1, Dobson teaches a gateway 100 and a NAT module 212 that runs the NAT services, wherein the devices on the DMT LAN 20 appear as a single IP address and uses private addressing, thus allowing the devices to communicate with external networks 90, including the Internet. DMT LAN20 uses private addressing, and a PPP session can be initiated via the PPP module 224 via multi-point forwarder 60, that enables the necessary routing functionality between local devices 70 and the external WAN environment 90. Note also a firewall 218. When a local device 70, known locally by its private address desires to communicate with a device on network 90, the request is sent to gateway 100, wherein the forwarder 60 translates the private address to a common IP address assigned to the gateway 100. See Figure 2 and columns 5 and 6. Note also that the gateway 100 has a public address for communicating with the public network 90. See column 7, lines 24-34. What is missing is the use of a plurality of NAT tables in the gateway.

In Bhatia, one finds the use of multiple network addressing tables (Fig. 5, element 435 and 514; note that Bhatia explicitly states elements 435 and 514 are equivalent, only that the static table is manually entered by a user; also see the definition of "NAT" ^{ASC} ~~by~~ from www.webopedia.com=>NAT, which both elements 435 and 514 meet) stored in a gateway (Fig. 5, element 300), where both tables translate between private and public addresses in the same way Dobson must translate between private addresses on the LAN to public address on the WAN. Bhatia has a priority scheme where the static NAT table is checked prior to the dynamic NAT table (elements 809 and 824). Bhatia also teaches the gateway being an ISDN LAN

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modem/router (Fig. 2A, element 200). Bhatia teaches that the advantage of having the static table is to allow the user to specify exactly which workstation on the LAN to route a packet (Column 2, lines 39-44) which would be advantageous for setting up or testing networks, etc.

Hirano further shows details of public/global to private address translation on ISDN networks, Figure 5, a NAT router that has a separate NAT PP and LAN NAT, so that a computer, for example on network 1 can communicate with a computer attached to the ISDN, with the NAT function per Figure 6, with translation between global and private addresses per Figure 8. Note also that a computer on network 1 can communicate with one on network 2, with NAT occurring at LAN2a, which requires the translations described at columns 6 and 7.

Therefore it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the teachings of Dobson per those of Bhatia and Hirano for the express purpose of having multiple address translation tables where Bhatia teaches the flexibility of allow a user to manually enter the NAT address into a table (Column 2, lines 39-44) while the other table relies on automated means, both of which translate public and private address and Hirano details separate NATs in a single device are used to translate the public/global and private addresses as a translation requires a received packet with an original address that is then translated by the appropriate NAT table and then sent with a new address as a result of the translation.

7. Per Claim 2, it is to be noted that the combined teachings represent a service selection gateway, as there are a plurality of logically separated networks, which represent service domains, to which the remote systems are to be connected, as a function of the appropriate NATs. For example, the Bhatia

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reference teaches the private and global addresses associated with networks and users (Fig. 1, multiple users 10a-10d, and multiple networks 50-70), as does Dobson and Hirano. Thus the combined teachings have NAT tables based upon the individual address translation functions. Thus the NAT tables store information in tables partitioned according to the individual NAT functions that map the private to global addresses in a single service domain/network.

8. Per Claims 3 and 4, each row of the NAT table apply to only a translation of a single domain (Fig. 8 of Hirano and Table 1 of Bhatia show only the one to one mapping) where the whole NAT table has mapping to multiple networks.

9. Per Claims 5 and 6, the original addresses can be local and the mapped address can be external per Dobson 20 and 90, which is described as being an external WAN, as well as the translations of Hirano. Bhatia shows mapping addresses to remote systems (element 60 and 70).

10. Per Claim 7, Dobson describes the set up of a PPP session at any local device 70 for PPP sessions handled via the NAT 212, see column 6, lines 1-14. Thus local addresses are assigned as the devices 70 are on the local network with the private addresses, as opposed to the external addresses on the WAN/Internet

90. The combined references teach the storing of services available (i.e. translation) with proper translation based upon the source and destination addresses.

11. Per Claims 8 and 9, Hirano shows separate NAT blocks (Fig. 8) for the NAT tables, presumably the same as any standard NAT table.

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12. Per Claim 10, the combined references teach the bidirectional nature of communication, the source at the external network with a destination on the local network.

13. Per Claims 11 and 12, the global forwarding is seen in Fig. 8 of Hirano, the combined references all have IP.

14. Per Claim 13-19, the means corresponding to the method analysis of claim 1 have been pointed out by reference numeral in the individual references, and is thus rendered obvious for the same reasons. Similarly, the means corresponding to claims 14-19 parallel the analysis of the method steps 2-9.

15. Per Claims 20-31, such are likewise rendered obvious per the analysis of parallel method claims 1-12, noting that the combined references are all computer based and thus require a computer readable medium in order to function properly.

16. Per Claims 32-44, the combined references show a gateway device per the analysis of the method claims 1-12, noting that the apparatus limitations have been set forth in the method step analysis. Hence the claims are rendered obvious for the same reasons. Note that the Bhatia and Hirano references show that the NAT tables are in the form of a memory, with the individual NAT tables formed of separate units (Fig. 5, elements 435 and 514). Note that service selection is carried out per Bhatia (Fig. 8, element 840).

Conclusion


17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 8:30am - 5:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (571) 272-4083. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ASC
08/16/2005


KIM HUYNH
PRIMARY EXAMINER

8/17/05